

**ABSTRACT**

A substrate testing apparatus for testing a substrate by irradiation of electron beam comprises a scan parameter calculating unit, a stage control unit for controlling the movement of a stage, and an electron beam control unit for controlling an irradiating position of electron beam. The scan parameter calculating unit calculates a stage speed and the irradiating position of electron beam on the basis of an array of measurement points in a unit area set for each substrate species of object to be tested. The scan parameters for the substrate species are automatically calculated, and the driving of the testing apparatus is controlled in accordance with the calculated parameters, whereby it is unnecessary to restart the software.